



## **NUCLEAR REGULATORY COMMISSION**

**[Docket Nos. 50-295 and 50-304; NRC-2011-0145]**

**ZionSolutions, LLC; Zion Nuclear Power Station, Units 1 and 2;**

### **Exemption from Certain Physical Security Requirements**

#### **1.0 Background**

Zion Nuclear Power Station (ZNPS) Units 1 and 2 were permanently shut down in February 1998, for economic reasons. On February 13, 1998, ComEd, the licensee at that time, submitted a letter certifying the permanent cessation of operations at ZNPS, Units 1 and 2. On March 9, 1998, ComEd submitted a letter certifying the permanent removal of fuel from the reactor vessels at ZNPS. Pursuant to Title 10, *Code of Federal Regulations* (10 CFR) 50.82(a)(2), upon docketing of the certification for permanent cessation of operations and permanent removal of fuel from the reactor vessels, the 10 CFR part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel. Subsequently ZNPS was placed in SAFSTOR. SAFSTOR is an NRC approved method of decommissioning a nuclear facility where the nuclear facility is placed and maintained in such condition that the nuclear facility can be safely stored and subsequently decontaminated to safe levels. All irradiated fuel is currently stored in the spent fuel pool at ZNPS. In September 2010, ownership of the permanently shut down facility and responsibility for its decommissioning was transferred to ZionSolutions (ZS), a subsidiary of EnergySolutions. ZS was established solely for the purpose of acquiring and decommissioning the ZNPS for release for unrestricted use, while transferring the spent nuclear fuel and Greater-Than-Class C (GTCC) radioactive waste to the ZNPS Independent Spent Fuel Storage Installation (ISFSI). As part of the process ZS

revised the ZNPS Physical Security Plan (PSP) for the protection of the nuclear material while in transit to, and while stored in, the ISFSI.

On December 2, 2010, ZNPS submitted a letter to the NRC (Document contains sensitive security related information and is not publically available) regarding compliance with the new physical security requirements in 10 CFR 73.55. The December 2, 2010, letter included exemption requests for portions of 10 CFR 73.55 which ZNPS believed no longer applied to their facility due to their permanently shut-down and defueled condition. On November 10, 2011, the NRC issued a letter to ZNPS (Agencywide Documents Access Management System (ADAMS) Accession Number ML112010331) providing the Commission's determination regarding the exemptions which ZNPS requested. During the technical review of the ZNPS exemption request, staff completed a Safety Evaluation Report (SER) (Document contains sensitive security related information and is not publically available). The staff concluded that exemptions from the following provisions should be granted: 10 CFR 73.55(c)(5); 10 CFR 73.55(h)(3)(ii); 10 CFR 73.55(i)(4)(i); 10 CFR 73.55(i)(4)(ii)(G); 10 CFR 73.55(k)(5)(ii); 10 CFR 73.55(k)(5)(iii); 10 CFR 73.55(n)(i); 10 CFR 73.55(n)(ii); 10 CFR 73.55(n)(iii); 10 CFR 73.55(p)(1)(i); and 10 CFR 73.55(p)(ii).

## **2.0 Request/Action**

Section 50.54(p)(1) of 10 CFR states, "The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with Appendix C of part 73 of this chapter for affecting the actions and decisions contained in the Responsibility Matrix of the safeguards contingency plan."

Part 73 of 10 CFR, "Physical Protection of Plant and Materials," provides, "This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used." In section 73.55, entitled "Requirements for physical protection of licensed activities in nuclear power reactors against

radiological sabotage,” paragraph (b)(1) states, “The licensee shall establish and maintain a physical protection program, to include a security organization, which will have as its objective to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety.”

By application dated June 18, 2012 (ADAMS Accession No. ML12179A498), as supplemented by letters dated June 5, 2013 (ADAMS Accession No. ML13157A308) and October 4, 2013 (ADAMS Accession No. ML13283A004), ZS submitted a proposed revision to the ZNPS PSP which included a transfer plan that described the ZNPS plan for moving spent fuel currently in wet spent fuel storage to dry cask storage at the ZNPS ISFSI Facility. ZS also submitted the proposed ZNPS ISFSI PSP. Associated with the submittal of the revised and new PSPs, ZS submitted exemption requests from 10 CFR 73.55(c)(5); 10 CFR 73.55(h)(3)(ii); 10 CFR 73.55(i)(4)(i); 10 CFR 73.55(i)(4)(ii)(G); 10 CFR 73.55(k)(5)(ii); and 10 CFR 73.55(k)(5)(iii) for the ZNPS facility and ISFSI.

### **3.0 Discussion**

Pursuant to 10 CFR 73.5, “Specific exemptions,” the Commission may grant exemptions from the regulations in this part either at the request of a licensee or on its own initiative as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

The NRC evaluated the proposed exemptions and documented the review in a Safety Evaluation which contains safeguards information and has been withheld from public disclosure pursuant to 10 CFR 2.390(d)(1).

The NRC determined that the ZNPS ISFSI PSP is adequate, and consistent with the reduced radiological risk and protective strategy for a decommissioning facility or a stand-alone ISFSI. As discussed in the SER, and consistent with the Commission’s authority 10 CFR 73.5,

the Commission is issuing exemptions from the following requirements :10 CFR 73.55(c)(5); 10 CFR 73.55(h)(3)(ii); 10 CFR(i)(2); 10 CFR 73.55(i)(4)(i); 10 CFR 73.55(i)(4)(ii)(G); 10 CFR 73.55(k)(5)(ii); 10 CFR 73.55(k)(5)(iii); 10 CFR 73.55(n)(i); 10 CFR 73.55(n)(ii); 10 CFR 73.55(n)(iii); 10 CFR 73.55(p(1)(i); and 10 CFR 73.55(p)(ii).

In Enclosure 1 to ZNPS letter of October 4, 2013, ZNPS requested that NRC affirm that specific exemptions previously granted to ZNPS for the defueled reactor as also applicable for the ZNPS ISFSI PSP. Specifically, the licensee requested affirmation of the exemptions to the following requirements for the ISFSI PSP: 10 CFR 73.55(b)(3)(i); 10 CFR 73.55(b)(4); 10 CFR 73.55(b)(6); 10 CFR 73.55(b)(9); 10 CFR 73.55(c)(4); 10 CFR 73.55(d)(3)(i); 10 CFR 73.55(e)-(e)(1)(i); 10 CFR 73.55(e)(7)(i)-(ii); 10 CFR 73.55(e)(9)(1)-(vi); 10 CFR 73.55(e)(10)(ii); 10 CFR 73.55(f)(1)-(4); 10 CFR 73.55(h)(2); 10 CFR 73.55(i); 10 CFR 73.55(i)(2); and 10 CFR 73.55(k)(1).

The ZNPS ISFSI PSP is, however, a stand-alone security plan that has been evaluated against the requirements of 10 CFR part 73. No application of a previous exemption is necessary.

Based on the evaluation in the associated safety evaluation, which considered the permanently shut-down and defueled conditions at the ZNPS, and the new ZNPS ISFSI facility where the fuel will be located within the protected area of the dry storage facility, the NRC has concluded that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by granting said exemptions; (2) such activities will be conducted in compliance with the Commission's regulations and orders; and (3) the approval of these exemptions will not be inimical to the common defense and security or the health and safety of the public and are otherwise in the public interest. These conclusions are discussed in greater detail in the staff's SER.

#### **4.0 Conclusion**

Accordingly, the Commission has determined that, pursuant to 10 CFR 73.5, an exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest based on permanently shut down and defueled conditions at the ZNPS. Therefore, the Commission hereby grants ZionSolutions an exemption from the requirements of 10 CFR part 73 as delineated above.

Pursuant to 10 CFR 51.22(c)(25), the Commission has determined the granting of these exemptions is categorically excluded and pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared. The exemption involves safeguard plans, as described in 10 CFR 51.22(c)(25)(vi)(F). Approval of this exemption request involves no significant hazards consideration; no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; no significant increase in individual or cumulative public or occupational radiation exposure; no significant construction impact; and no significant increase in the potential for or consequences from radiological accidents.

These exemptions are effective upon issuance.

Dated at Rockville, Maryland, this 13<sup>th</sup> day of December 2013.

FOR THE NUCLEAR REGULATORY COMMISSION

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